From wang!elf.wang.com!ucsd.edu!info-hams-relay Fri Apr 5 04:30:58 1991 remote
from tosspot
Received: by tosspot (1.64/waf)
     via UUCP; Fri, 05 Apr 91 07:53:56 EST
     for lee
Received: from somewhere by elf.wang.com id aa09481; Fri, 5 Apr 91 4:30:57 GMT
Received: from ucsd.edu by relay1.UU.NET with SMTP
     (5.61/UUNET-shadow-mx) id AA05344; Thu, 4 Apr 91 23:09:33 -0500
Received: by ucsd.edu; id AA08506
     sendmail 5.64/UCSD-2.1-sun
     Thu, 4 Apr 91 18:51:42 -0800 for brian
Received: by ucsd.edu; id AA08487
     sendmail 5.64/UCSD-2.1-sun
     Thu, 4 Apr 91 18:51:36 -0800 for /usr/lib/sendmail -oc -odb -oQ/var/spool/
lqueue -oi -finfo-hams-relay info-hams-list
Message-Id: <9104050251.AA08487@ucsd.edu>
Date: Thu, 4 Apr 91 18:51:33 PST
From: Info-Hams Mailing List and Newsgroup <info-hams-relay@ucsd.edu>
Reply-To: Info-Hams@ucsd.edu
Subject: Info-Hams Digest V91 #268
To: Info-Hams@ucsd.edu

Info-Hams Digest   Thu, 4 Apr 91   Volume 91 : Issue 268

Today's Topics:

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official

policies or positions of any party. Your mileage may vary. So there.

Date: 5 Apr 91 02:13:38 GMT
From: deccrl!news.crl.dec.com!shlump.nac.dec.com!mast.enet.dec.com!
reisert@decwrl.dec.com
Subject: Advanced Tools for MUF Prediction
To: info-hams@ucsd.edu

In article <5982@trantor.harris-atd.com>,
     blombardi@x102c.ess.harris.com (Bob Lombardi 44139) writes...
>
>I'm interested in the state-of-the-art computer tools for
>prediction of propagation for HF via the ionosphere.

Jake, W1FM, has written a program called IONSOUND which is highly accurate.
I believe he advertises it in the ham magazines (it's on page 30 of the
March/April 1991 National Contest Journal, for example). It was also
reviewed in the July 1990 issue of CQ Magazine. The ad is too long to type
in here, but you can call Jake at 617-862-6742 for information. It's
$29.95+$3.00 shipping, coprocessor not required.

- Jim AD1C

=-=

"The opinions expressed here in no way represent the views of Digital
 Equipment Corporation."

James J. Reisert   Internet: reisert@mast.enet.dec.com
Digital Equipment Corp.   UUCP: ...decwrl!mast.enet!reisert
146 Main Street   Voice: 508-493-5293
Maynard, MA 01754   FAX: 508-493-????

Date: 4 Apr 91 21:04:22 GMT
From: swrinde!elroy.jpl.nasa.gov!sdd.hp.com!spool.mu.edu!cs.umn.edu!
talon.UCS.ORST.EDU!usenet!jacobs.CS.ORST.EDU!bailey@ucsd.edu
Subject: Any Fancy frequency standard enthusiasts out there?
To: info-hams@ucsd.edu

Chuck has a good idea here,, how about a mailing list or something for those of
us which admire/build/repair crystal and atomic standards and time/freq rcvrs?

As background about myself, I've repaired and played with OCXO/Rb/Cs standards
and enjoy designing/building time/freq rcvrs. I'm also interested in swapping
bits and pieces of this sort of equipment (working or not!) My nominal interest

is freq. control for microwave amatuer narrowband stuff, but over time it has some of the flavor of a hobby in its own right...

Kirk Bailey N7CCB (bailey@mist.cs.orst.edu)
P.O. Box 1702
Corvallis, OR 97339
503-753-9051

Date: 5 Apr 91 00:51:12 GMT
From: sdd.hp.com!zaphod.mps.ohio-state.edu!uwm.edu!ux1.cso.uiuc.edu!phil@ucsd.edu
Subject: Any Fancy frequency standard enthusiasts out there?
To: info-hams@ucsd.edu

chuck@eng.umd.edu (Chuck Harris - WA3UQV) writes:

> Are there any frequency standards enthusiasts out there?

> You know who I mean, those of you who have closet LORAN-C and GPS
>receivers tracking your Rubidium Vapor Frequency References. People who
>get giddy when they talk about 1 part in 10E12 accuracy. Who know who
>Austron is, and what "996" means. Who can discuss the heratage of Varian,
>Efratom, Tracor, Hp, Sulzer, Kode, ...

> You are out there, I can feel it. (or maybe it is just the radiation
>from my RVFR) Lets talk.

Maybe we are here. Where is the gear?

Just how much does this stuff cost on the used market?

Can I find them at Dayton?

How easy is it to fix, calibrate, track?

Fill us in, Chuck. I'd even suggest it as an article for QEX or Communications Quarterly.

--
/***\
/ Phil Howard -- KA9WGN -- phil@ux1.cso.uiuc.edu \
\ Lietuva laisva -- Brivu Latviju -- Eesti vabaks /
***/

Date: 5 Apr 91 00:47:56 GMT
From: sdd.hp.com!caen!news.cs.indiana.edu!ux1.cso.uiuc.edu!phil@ucsd.edu

Subject: ATV: AM or FM
To: info-hams@ucsd.edu

smith@sndpit.enet.dec.com (Willie Smith) writes:

>OK, if I understand you correctly, this means the lowest frequencies will
>be at least as good as AM and the higher frequencies might be noisier, yes?

The lower frequencies can actually be better.

Think of AM as having a straight line to describe the change of signal to
noise ratio with a varying signal strength. FM would have a curve that
is better than AM for medium strengths, and worse for much weaker. However
the point that FM and AM are equal is going to be DIFFERENT for different
modulating frequencies, at a given deviation, because of the difference
in the modulation index over the modulation spectrum.

>If this means that my sync and monochrome stuff is going to work well but
>my color (and some fine detail) might be noisy, I can live with that. In
>fact, black and white is probably OK (though a waste of a good color
>camcorder :+). I can always throw more power at it, eh?

A lot of ATVers use B&W. It's cheaper in many cases. However a lot do
use color. I hear them commenting (listen in on 144.34 in the Midwest)
about signal levels that "come in in color".

>What parameters does it depend on? Does this mean that within a certain
>radius of my transmitter (with an omni antenna) the signal will be good but
>outside that it will drop off rapidly? If so that's good, as my teleop
>vehicle will have a limited range and not interfere with other ATV folk far
>away. If anyone can do the math, I'm planning on using a color signal with
>no sound (giving 3.6 MHz baseband bandwidth?) on a 900 MHz FM transmitter

3.6 MHz - 3.57954545... MHz = 20.454545. kHz !!!!

That's not enough proper pass the color subcarrier's SIDEBANDS.

The color subcarrier is modulated in quadrature with TWO different signals,
so BOTH sidebands are needed.

>with the deviation turned down so as to fit into a 6 MHz ATV sub-band.
>With transmitter power of 5 watts into a 1/4-wave whip, and the possible
>presence of trees and houses, what's my usable range? [Like I said, no-one
>knows, but hopefully I'll know soon....]

To fit withing a total of 6 MHz, you will have to limit sidebands to 3 MHz
on a symmetrical signal. AM and FM are both symmetrical. That means you
cannot have color on EITHER, and the FM deviation will probably have to be

well under 1 MHz.

Vestigial SideBand (VSB) is used by broadcast TV to fit within 6 MHz.

The lower sideband of the carrier extends no further than 1.25 MHz and the color and audio subcarriers are present only on the upper side. VSB is a NON-symmetrical signal.

My concern is that to get decent quality out of FM ATV the deviation will have to be cranked up (perhaps at least 6 MHz). This will result in a spectrum usage of at least 28 MHz. With that high a modulation index, there will be at least a set of second order sidebands at DOUBLE the modulating frequency from the carrier on BOTH sides. Add the deviation for a mixed signal. An FM ATV signal can "splatter" the band easily.

FM ATV does have some notable advantages, such as the lack of sync compression problems.
--

 /**\
/ Phil Howard -- KA9WGN -- phil@ux1.cso.uiuc.edu   \
\ Lietuva laisva -- Brivu Latviju -- Eesti vabaks   /
 **/

Date: 4 Apr 91 21:54:14 GMT
From: tut.cis.ohio-state.edu!bgsuvax!fyfe@ucbvax.berkeley.edu
Subject: Can you really learn code from tapes?
To: info-hams@ucsd.edu

Date: 4 Apr 91 22:06:24 GMT
From: tut.cis.ohio-state.edu!bgsuvax!fyfe@ucbvax.berkeley.edu
Subject: Can you really learn code from tapes?
To: info-hams@ucsd.edu

Date: 5 Apr 91 01:15:25 GMT
From: swrinde!zaphod.mps.ohio-state.edu!wuarchive!uwm.edu!bionet!agate!
stanford.edu!leland.Stanford.EDU!stankus@ucsd.edu
Subject: Dual-Band Antennas
To: info-hams@ucsd.edu

I am looking for information on dualband antennas(2M/440) for automobile installations. What I want to do is have a reasonable antenna in my car so I can hook my IC24AT into it rather than the rubber duck. I am possibly thinking about the Larsen, but I really don't know what is out there. Any suggestions or comments would be greatly appreciated.

Tnx

John Stankus, N5PEE
stankus@leland.stanford.edu

Chemistry Dept.
Stanford University

Date: 4 Apr 91 18:50:01 GMT
From: news-mail-gateway@ucsd.edu
Subject: GEOMAGNETIC STORM ALERT - STORM IN PROGRESS
To: info-hams@ucsd.edu

/\

GEOMAGNETIC STORM ALERT

/\

Issued: 18:30 UT, 04 April

Geomagnetic Storm Alert
Auroral Storm Warning

ATTENTION:

A sudden storm commencement (SSC) was observed at magnetic observatories at 11:23 UT on 04 April. This was immediately followed by a period of major geomagnetic and auroral storming for about two hours, which then declined to minor storm levels thereafter. Presently, the magnetic field is holding at very active to minor storm levels.

A GEOMAGNETIC STORM ALERT has been issued. This storm has been caused by the major class M6/2B flare which occurred at 23:27 UT on 02 April. An AURORAL ACTIVITY ALERT has been issued for the middle and high latitudes for 04 and 05 April. Activity (auroral and geomagnetic) should diminish on 06 April. Since the moon does not rise until the early morning hours, there should be a good auroral display of activity over middle and high latitudes.

Please send any reports of auroral activity, HF or VHF degradation and/or other observations or anomalies to: oler@hg.uleth.ca.

This storm should subside and end on 06 April. A return to active to unsettled geomagnetic conditions is expected thereafter.

** End of Alert **

Date: 4 Apr 91 21:28:19 GMT
From: sun-barr!newstop!west!stan@decwrl.dec.com
Subject: HR 2600 Manual
To: info-hams@ucsd.edu

It seems that I have misplaced the manual for my Unidin HR 2600. If some kind soul could copy one for me I would be happy to pay copy and postage costs.

Thanks and 73,
Stan, KB6RQZ

Please reply via e-mail to stan@suntzu.West.Sun.COM

Date: 4 Apr 91 19:45:10 GMT
From: usc!wuarchive!emory!ducvax.auburn.edu!eng.auburn.edu!bh@ucsd.edu
Subject: HT
To: info-hams@ucsd.edu

I'm planning on getting a dual-band HT and I am trying to decide between Alinco and Yaesu. Any suggestions would be appreciated.

Brian Hartsfield

Date: 4 Apr 91 17:14:15 GMT
From: sdd.hp.com!spool.mu.edu!snorkelwacker.mit.edu!bloom-beacon!eru!hagbard!sunic!news.funet.fi!ousrvr!ousrvr!luru@ucsd.edu
Subject: IC-24 mods, where?
To: info-hams@ucsd.edu

Lost it. When, which archive?

Better yet, e-mail..

     Luru
--
     ///
     o-o   Ham Radio Operators Do It In Higher Frequency
      o

Date: 4 Apr 91 21:59:41 GMT
From: sdd.hp.com!caen!news.cs.indiana.edu!news.nd.edu!mentor.cc.purdue.edu!
mace.cc.purdue.edu!dil@ucsd.edu
Subject: Licensing Philosophy
To: info-hams@ucsd.edu

In article <12593@pt.cs.cmu.edu>, chiles@chiles.slisp.cs.cmu.edu (Bill Chiles)
writes:
>   [a ham] license conveys the right to make, modify and experiment with
>   transmitters.
>
> This is interesting; however, there is no law against any CBer building a
> transmitter and operating it on a valid CB frequency. As you point out,

BULL CORN! You can't even (legally) open the case unless you are a holder of a
second class radiotelephone license. CB is expressly intended as a short
range communications utility on fixed frequencies, at very limited power
levels with small antennas.
In fact, long distance communications in and of itself is illegal,
even if it is done with legal equipment. Experimentation is strongly
discouraged.

Besides, if you're sufficently astute to build your own transmitter, getting a
ham ticket should be a trivial effort. There's no need to clown
around on the CB frequencies.
--
Perry G. Ramsey   Department of Earth and Atmospheric Sciences
dil@mace.cc.purdue.edu   Purdue University, W. Lafayette, IN USA
perryr@vm.cc.purdue.edu   *** IMAGINE YOUR LOGO HERE ******
    Ten thousand low-lifes a day read this space.

Date: 4 Apr 91 22:40:04 GMT
From: crayola.cs.umd.edu!furuta@mimsy.umd.edu
Subject: Licensing Philosophy
To: info-hams@ucsd.edu

My previous article seems to have lost its initial paragraph somehow. It just
set up the argument that most of the the Novice/Tech "theory" questions
have basis in practice for everyone who operates (including us NoCodes),
not only for those who are intending to build.

                        --Rick

Date: 4 Apr 91 19:45:58 GMT
From: usc!zaphod.mps.ohio-state.edu!pacific.mps.ohio-state.edu!linac!unixhub!
slacvm!gjm@ucsd.edu
Subject: Shuttle voice link rebroadcast??
To: info-hams@ucsd.edu

For previous shuttle missions, if memory serves me, various hams have re-
broadcasted the voice link btwn Houston and the shuttle - is my memory failing
me or does anyone know if this will be done again for Friday's bird?

many thanks in advance,
=greg

Date: 4 Apr 91 21:48:16 GMT
From: swrinde!elroy.jpl.nasa.gov!sdd.hp.com!spool.mu.edu!news.cs.indiana.edu!
news.nd.edu!mentor.cc.purdue.edu!mace.cc.purdue.edu!dil@ucsd.edu
Subject: Ultrasonics.
To: info-hams@ucsd.edu

In article <1991Apr4.164309.21711@math.lsa.umich.edu>, hideg@spsd4360a.erim.org
(Steve Hideg (Mr. Fabulous)) writes:
> In article <04.Apr.91.16:07:10.BST.#3428@UK.AC.NWL.IA>
> PJML@ibma.nerc-wallingford.ac.UK (Pete Lucas, NCS-TLC, Holbrook House,
> Swindon) writes:
> The Heath Company now sells a device called the Dazer, that transmits an audio
> (tone?) at a frequency that only dogs can hear. It supposedly "stops dogs in
their tracks". Is this a myth?

It depends. What does it say to them?   :-)

Seriously, how does the dog know what the sound means when he hears it,
unless he's been trained to respond to it in some way.

Please follow up to rec.dogs.silent-whistles.

--

Perry G. Ramsey   Department of Earth and Atmospheric Sciences
dil@mace.cc.purdue.edu   Purdue University, W. Lafayette, IN USA
perryr@vm.cc.purdue.edu   *** IMAGINE YOUR LOGO HERE ******
    Ten thousand low-lifes a day read this space.

Date: 4 Apr 91 22:35:35 GMT
From: swrinde!zaphod.mps.ohio-state.edu!rpi!crdgw1!ethiopia@ucsd.edu
To: info-hams@ucsd.edu

References <22149@yunexus.YorkU.CA>, <2971@ksr.com>,
<1596@aupair.cs.athabascau.ca>
Reply-To : mallick@ethiopia (john a mallick)
Subject : Re: Antenna Matching Gedanken Experiment

In article <1596@aupair.cs.athabascau.ca>, rwa@cs (Ross Alexander) writes:
>Lately there's been some talk in this group about antenna matching,
>SWR values, and so on. Someone (sorry, didn't save the article)

[...deleted...]

>Then I did a little gedanken experiment that got me wondering again.
>
>Say one has a rig driving a chunk of (lossless) coax, said coax being
>terminated in either a dead short or an open - the intent is to get
>perfect reflection. OK, so the SWR is infinite. All the power stays
>in the transmitter. Things get hot!
>
>Tying that back to the real world, it happens that for a while I was
>running an antenna that loaded well on 80, 40, 20, & 10 but very
>poorly on 15. The fans in my rig ran much harder when working on 15.
>The heatsinks got hotter. Perhaps my rig didn't read that book...
>
[...deleted...]

OK, I'll take a shot at this. The lossless, unterminated coax can't
absorb any time-average power since it appears as a pure reactance
(either capacitive or inductive, depending upon the length). In a pure
reactance, the voltage and current are 90 degrees out of phase.
Because this reactance presents some value of impedance at chosen
operating frequency, the rig will try to load into it, but there is no
time-average power transfer at RF. However, there is dissipation due
to ohmic (i^2 R) losses in the passive components like coils and
capacitors, and there is dissipation in the active final devices
(transistors) due to current flow through the device with a finite
voltage across it (time average v * i over once cycle). When feeding
a reactive load, the device dissipation can be much higher than

normal, since the phase relationship between v and i is not what the
designers intended. This is NOT reflected power going back in a
burning up the finals; it's just that device dissipation usually
increases when it is presented with a reactive load instead of a resistive
one. For the old-timers, the load line goes from a "line" to a
"circle".

Hope this helps a bit.

John Mallick WA1HNL

(mallick@crd.ge.com)

Date: 5 Apr 91 00:30:27 GMT
From: swrinde!zaphod.mps.ohio-state.edu!wuarchive!m.cs.uiuc.edu!ux1.cso.uiuc.edu!
phil@ucsd.edu
To: info-hams@ucsd.edu

References <1991Mar30.174528.3952@ee.eng.ohio-state.edu>, <2659@ke4zv.UUCP>,
<1991Apr3.201909.22363@grian.cps.altadena.ca.us>#
Subject : Re: frequency standards

morris@grian.cps.altadena.ca.us (Mike Morris) writes:

>I checked on this with a local ham who works for a network TV station.
>He says it is true, but there is still a cheap standard available: the
>transmitter carrier. Apparently KCBS-TV (channel 2) here in Los Angeles uses
>a rubidium standard for it's transmitter frequency control. A few weeks
>later I was over at another friends 2-way shop and remarked on that and
>the chief tech showed me that his Cushman service monitor was currently
>set to the video carrier frequency - he uses the TV station to verify
>the synthesizer in the Cushman before he sets a customer radio to
>frequency.

Just how accurate is it?

For SOME purposes, referencing two different standards (and I cannot get
KCBS-TV here in Illinois) that go off by 180 degrees in 24 hours won't work.

There are some uses where high accuracy, but not common lock, is needed,
such as callibrating your frequency counter. It's nice to know that I can
recalibrate things when I am in LA.

Other uses don't require the accuracy so much as that everyone using it
is in sync, and once in sync stays together within some accuracy of PHASE.
LOWfers use WWVB for this purpose (see issue #1 of Communications Quarterly).

I have a couple of project idea that need this kind of reference, need to use it in the full VHF and UHF range, and need it common just about everywhere (but in the USA to begin with). A network feed (from the SAME network) *MIGHT* have done the job. I'm dismissing that as a possibility now for many reasons.
--

 /**\
/ Phil Howard -- KA9WGN -- phil@ux1.cso.uiuc.edu   \
\ Lietuva laisva -- Brivu Latviju -- Eesti vabaks   /
 **/

Date: 4 Apr 91 17:46:47 GMT
From: pacbell.com!tandem!netcom!edg@ucsd.edu
To: info-hams@ucsd.edu

References <23994@well.sf.ca.us>, <21707@shlump.nac.dec.com>,
<1458@rust.zso.dec.com>
Subject : Re: No-Code Testing Questions

In article <1458@rust.zso.dec.com> stoppani@rust.zso.dec.com (Pete Stoppani) writes:
>In article <21707@shlump.nac.dec.com>, koning@koning.enet.dec.com (Paul Koning) writes:
>My understanding is that there are in fact two Technician licenses:
>
>   Technician no-code (new no-code license)
>   Technician + code (same as old Technician)
>
>So it seems reasonable to me that there should be two names. I've read that
>they are simply called "Technician" and "Technician Plus Code".
>
There is only one license. It is called Technician.
There is only one license. It is called Technician.
There is only one license. It is called Technician.
There is only one license. It is called Technician.

If you hold that license, and you can also produce some documentation that you passed a code test, you are authorized to operate with novice priveleges under 30 megahertz. Documentation can be a novice or technician license issued prior to 14 Feb 91, or a CSCE for element 1A, B or C.

A technician (issued after 14 Feb) who passes a code test will not receive a new license. S/he will not have a form 610 sent to the government. The burden of proof will be on the technician to prove that any HF license was legal. The situation is the same as for somebody who has upgraded, and is waiting for a new license. The operation based

on the CSCE is legal, but if questioned, the licensee must produce the
CSCE.

One big difference is that the Technician who wishes to operate HF must
retain the documentation FOREVER, and it's not replacable.
              -edg
--
Ed Greenberg | Home: +1 408 283 0184 | edg@netcom.com
P. O. Box 28618 | Work: +1 408 764 5305 | CIS: 76703,1070
San Jose, CA 95159 | Fax: +1 408 764 5003 | WB2GOH @ N6LDL.CA.USA

Date: (null)
From: (null)
It really seems not a whole lot different than typing skills in the sense
that you - after a while - don't necessarily think, "I'll hit the 'E' key".
Rather, you think, "'E'" - period! (no pun intended :-) You just type the
letter 'E'. Likewise I've got to believe code is the same way. Eventually,
you get to a point where as on a keyboard you type a word, in code you
"hear" a word.

I just can't wait (but I bet I do) to get to that point! ;-)

bobb

****
*   *
* Bob Fyfe   *
* c/o Computer Services   *
* Rm. 241 Math-Scieince Building   "This world is not my home...   *
* Bowling Green State University   ...I'm just-a passing through" *
* Bowling Green, Ohio 43403   *
*   *
****
*   *
* Phone: (419) 372-2103   *
* Bitnet: BFYFE@TRAPPER -or- FYFE@BGSUOPIE   *
* Internet: fyfe@andy.bgsu.edu -or- bfyfe@trapper.bgsu.edu   *
*   *
****

Date: (null)

From: (null)
What an interesting phenomena! (sp?) I thought I was the only one who had this problem. In fact, what was really intersting was the fact that I just went and took the 13 WPM code test and failed. Failing wasn't so terribly unexpected. What was unexpected was how miserably I failed. It felt like they were sending at 25 WPM! Came back home and copied at 13 WPM with about 95%+ accuracy. Now I suppose that I could have had some jitters but not anything to cause that.

Since then, what I have found helpful is having a few of the OT's around generate ascii files of pseudo QSO's. Most computer code tutors allow you to read in from a file. This has worked well for me and it is helping me to learn some of those prosigns...

bobb


```
**************************************************************************
*                                                                        *
*  Bob Fyfe                                                              *
*  c/o Computer Services                                                 *
*  Rm. 241 Math-Scieince Building    "This world is not my home...       *
*  Bowling Green State University       ...I'm just-a passing through"  *
*  Bowling Green, Ohio 43403                                             *
*                                                                        *
**************************************************************************
*                                                                        *
*  Phone:    (419) 372-2103                                             *
*  Bitnet:   BFYFE@TRAPPER  -or-  FYFE@BGSUOPIE                         *
*  Internet: fyfe@andy.bgsu.edu  -or-  bfyfe@trapper.bgsu.edu            *
*                                                                        *
**************************************************************************
```

End of Info-Hams Digest
****